

FORTY-FIRST ANNUAL REPORT
of the
BUREAU OF MINES
DEPARTMENT OF INSPECTION
of the
STATE OF MISSOURI



YEAR ENDING DECEMBER THIRTY-FIRST

1928

JEFFERSON CITY, MISSOURI

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Iron Mining is experiencing a revival of activity and the 1928 production showed an increase over the previous year.

Accidents

The number of fatal accidents for the year 1928 was slightly in excess of the previous year, totaling 21, of which 8 occurred in the lead and zinc mines, 11 in the coal mines, 1 in the clay mines and 1 in the shale mines. While an increase in all accidents is always deplorable, the percentage of fatalities occurring in the Missouri Mines is on a par with the larger mining states, and considerably below the percentages shown by many other states. All fatal accidents were single accidents occurring in the general course of operation; some being chargeable to carelessness while others were reported unavoidable.

The Inspection Department contends that, while mining is classed as an hazardous occupation, the great majority of fatal accidents occurring are traceable to neglect or carelessness of the deceased or of those in charge of operation, and that the splendid work of the Safety Engineers and all the efforts put forth by the Mine Inspection Department cannot correct this condition, although much progress has been made in that direction.

In conclusion the Inspection Department of the Bureau of Mines desires to express its appreciation for the co-operation extended by all concerned. It is our belief that much headway has been made in the way of removing dangerous conditions in and around the mines, and with the continued good will and co-operation of the mine operators, safety engineers and miners, we feel that much good may be accomplished in the future.

Respectfully submitted;
FRANK G. FENIX,
Chief Inspector.

Lead and Zinc Mines

THE metal market of the world, while maintaining a fairly even price level throughout the year of 1928, did not recover from the slump in metal prices sufficiently to cause a reopening of mines and a general increase in activity, consequently production of both lead and zinc in Missouri mines dropped considerably below that of 1927.

The Southeastern District

The great Southeastern Lead district in St. Francois, Iron and Madison Counties dropped 30,000 tons below the production of the previous year, although there was a steady production throughout the year, the mines operating an average of three hundred and nine days, there was a decrease of four hundred and ninety-four in number of men employed. Part of the loss in production was due to the shut-down of Mine LaMotte in Madison county, where general overhauling was taking place, and the building of a large mill was in progress.

A great deal of improvement work was carried on during the year. Additions to mills and power houses were made and the flotation plants have been enlarged and improved. Several large settling tanks and drying plants were installed to take care of the fine lead which heretofore went into the slime. A zinc separator was added by the St. Joseph Lead Company to their Leadwood and Rivermines plants. Zinc furnaces were also added to the smelting plant at Herculaneum, Mo.

Prospect drilling was carried on very extensively during 1928 in Madison, St. Francois and Iron Counties and several new companies entered this field. The Eagle Picher Lead Company which has been operating a refining plant in Washington County for the Barytes produced in that section, carried on prospecting work in this district during the greater part of the year.

The Missouri Lead Company, a new company with offices at Farmington, did most of its prospecting near Libertyville in St. Francois County.

More than usual attention was paid to Madison County during the past year. The St. Louis Smelting and Refining Company entered this county by purchasing the property and acreage

known as the Schulte Mine. A new shaft was put down to a level of 241 feet and the discovery of a very promising ore body was reported, drifts having been cut in two directions. At present the ore is being dumped on the surface, but it is the intention of the company to ship the ore to their large concentrating mill at St. Francois as soon as the railroad, which is being surveyed, is placed in operation.

Another new company entering Madison County is the Conqueror Mining Company, which took over the property known as the old Catherine Mine. They erected a 500-ton mill of the Joplin type and started to remill the old chat pile left by the Federal Lead Company several years ago. Other improvements and extensions are to follow.

The holdings of the old Sweetwater Mining Company in Madison County were purchased by the St. Joseph Lead Company, a new shaft put down to a level of 250 feet and a good ore body established. Old Shaft No. 14 was reclaimed and production will commence as soon as the large concentrating mill under construction is completed.

The properties of the St. Joseph Lead Company were kept in operation three hundred and nine days during 1928 and produced approximately 7,000 tons of lead above the 1927 production. They employ 1,890 men, 860 of whom work underground and the balance of 1,030 are employed on top and as mill men. The above number does not include 87 employees who take care of the central power station, nor does it account for 26 men to look after roof, who are contract drillers. The central power plant has nine boilers and five turbines and supplies the electric current for all the mines of the company.

The St. Louis Smelting and Refining Company, a subsidiary of the National Lead Company, whose mines are located in St. Francois County, and employ 714 men, operated its mines 310 days during 1928 and its production was just slightly under that of the previous year. No improvements were reported.

Mine LaMotte in Madison County, reported to be the oldest lead mine in America, and producing 10,000 tons of lead during the previous year, was not in the list of production for 1928. Nevertheless, the mine is not to be abandoned, but a new concentrating mill of large capacity has been built and operations for the coming year are expected to be on a large scale. The Mine LaMotte corporation has a capital stock of \$100,000.00 while the amount invested in land and plant is \$1,951,815.00. The

Corporation controls surface rights in 5,000 acres and mineral rights in 24,000 acres, all located in Madison and St. Francois Counties.

The Doe Run Lead Company of Rivermines in St. Francois County operated with a decreased force, nearly two hundred men less than during 1927, and while being in operation only one day less than the previous year reduced its production from 73,711 tons of lead in 1927 to 45,230 tons in 1928.

The Desloge Consolidated Lead Company of Desloge in St. Francois County, operated on an average 309 days during the year, increasing their production approximately 4,000 tons. They finished work on their 2000-ton concentrating plant, completed the electrification of Shaft No. 6, and differential gin plant.

There were four fatal accidents, occurring in the mines of the Southeastern District during 1928, two more than during the previous year. Three of these accidents were not chargeable to any defect in the mines or neglect, but were the result of carelessness or thoughtlessness on the part of the workman, while one of these was unavoidable. Non-fatal accidents were reduced to a minimum.

The Southeastern District is in charge of Deputy Inspector Tolbert Henson of Perryville.

The Joplin District

On account of the production of the Oklahoma field, being in excess of the demand, there was very little production in the Joplin District other than in the mines having highly disseminated ore faces, where a high recovery is made.

While a number of large companies carried on development work throughout the year 1928, and according to reports, several new ore bodies were established, there is little chance of having very much production in the Joplin field until production in the Oklahoma and Kansas fields drops below the demand, or until the demand for Zinc ore increases and general market conditions improve.

Production by small companies has been almost eliminated because the large mines which were not in operation were filled with water and the small operating companies cannot afford to drain the ground.

The Admiralty Zinc Company, operating the Missouri Mine on the Missouri Lead and Zinc Company land, during the year

TABLE NO. 1—LEAD AND ZINC PRODUCTION.

Operating Company.	Postoffice Address.	Name of Mine.	County.	Capital Stock.	Investment, Land and Plant.
JOPLIN DISTRICT—					
American Zinc, Lead and Smelting Co.	Box 870, Joplin.	High Five Mine.	Jasper.		*\$200,000.00
Admiralty Zinc Co.	Douthat, Okla.	Missouri Mine.	Jasper.	\$600,000.00	142,246.11
Barbo Mining Company.	Aurora	Barbo Mine.	Newton.	50,000.00	75,000.00
C. & S. Mining Company.	205 Miners' Bk., Joplin.	C. & S. Mine.	Jasper.	40,000.00	40,000.00
Federal Mining & Smelting Co.	Baxter Springs, Kan.	{Granby American. Granby Davis.	{Newton. Newton.	18,000,000.00	*300,000.00
Four Corners' Mining Co.	412 Bartlett Bldg., Joplin	Four Corners Mine.	Jasper.	100,000.00	25,000.00
Howe Mining Company.	Box 575, Picher, Okla.	Howe Mine.	Jasper.		26,000.00
Joplin Mining Company.	1810 Bird, Joplin.	Joplin Mining Co.	Jasper.	100,000.00	50,000.00
Kansas Explorations Co., Inc.	Joplin.	Isherwood.	Jasper.		*300,000.00
Missouri Mining Company.	Box 493, Joplin.	Waco-Nichols.	Jasper.		88,322.32
Missouri-Kan. Zinc Corporation.	Waco.	Barnsdall Mine No. 2.	Jasper.	1,300,000.00	203,556.87
Octagon Mining Company.	Smithfield.	Octagon.	Jasper.	5,000.00	5,000.00
St. Charles Mining Co.	Box 71, Webb City.	St. Charles.	Newton.	60,000.00	60,000.00
St. Louis Smelting and Refining Company.	722 Chestnut, St. Louis.	St. Louis Smelt & Ref.	Jasper.	500,000.00	145,638.89
Universal Explorations Company.	71 Brdway, N. Y. City.	Gasche Mine.	Jasper.	10,000.00	57,000.00
Ben C. Westerman.	1727 Empire, Joplin.	Riverside Mine.	Newton.		30,000.00
SOUTHEASTERN DISTRICT—					
Annapolis Lead Company.	917 Pine St., St. Louis.	Annapolis.	Iron.	2,500,000.00	2,354,347.70
Desloge Cons. Lead Company.	Desloge.	Desloge Mines.	St. Francois.	1,000,000.00	3,188,597.84
Doe Run Lead Company.	Bonne Terre.	Doe Run Mines.	St. Francois.		4,709,430.81
Mine La Motte Corporation.	Bonne Terre.	Mine La Motte.	Madison.	100,000.00	1,951,815.10
St. Joseph Lead Company.	Bonne Terre.	St. Joe Lead.	St. Francois.	20,000,000.00	28,619,924.72
St. Louis Smelting and Refining Works.	722 Chestnut, St. Louis.	St. Louis Smelt.	St. Francois.	65,784,000.00	59,950.00

*Estimated.

TABLE NO. 2—LEAD AND ZINC PRODUCTION.

Operating Company.	No. Acres Controlled.	No. of Shafts	Depth of Working Level, Feet.	Ventilation.	Capacity Concentrating Plants, Tons.	No. of Pumps.	Capacity Gals. per Min.	No. of Ore Faces Worked.	Average Height of Ore Face, Feet
JOPLIN DISTRICT—									
American Zinc, Lead and Smelting Company.	120	2	220						35
Admiralty Zinc Company.	1,000	2	160	Electric Blowers.	150	4	2,000	5	6
Barbo Mining Company.	100	2	120	Natural.	200	3	125	4	15
C. & S. Mining Company.	120	2	190	Natural.	250	1	500		
Federal Mining and Smelting Company.	6,500	6	90-280	Blowers.		5	2,000	14	20
Federal Mining and Smelting, Granby-Davis.	200	1	220	Blowers.	500	1	150	10	16
Four Corners Mining Co.	83	2	80	Air Shaft.	150	2	300	2	12
Howe Mining Company.	25	2	55	Natural.	75	1			
Joplin Mining Company.	37	4	100	Natural.	150	3	750	5	12
Kansas Explorations Company, Inc.	650	6	140	Blowers.	300	3	1,000	7	20
Missouri Mining Company.	520	19	178	Two blowers.	300	2	1,000	18	30
Missouri-Kansas Zinc Corporation.	66	4	238-312	Blower.	350	1	250	6	20
Octagon Mining Company.	40	1	150	Blower.	150	1	600	2	30
St. Charles Mining Company.	30	2	125	Two shafts.	100	1	250	2	6-15
St. Louis Smelting and Refining Company.	60	2	280	Blowers.	75	1	400		
Universal Explorations Company.	40	2	196-203	Natural.	300	1	300	6	25
Ben C. Westerman.		1	153	Natural.	200	1		2	8
SOUTHEASTERN DISTRICT—									
Annapolis Lead Company.	Est. 7000	1	440	Natural, Artificial.	200	15	100-400	20	14
Desloge Cons. Lead Company.	7,646	3	365	Natural.	2,000	6	3,800	52	20
Doe Run Lead Company.	6,998	4	475	Natural.	5,000	60	50-1,200	75	9
Mine La Motte Corporation.	29,000	2	200	Natural.		5	50-250	8	9
St. Joseph Lead Company.	29,543	12	350	Natural.	10,300	94	50-1,200	158	14
St. Louis Smelting and Refining Works.	2,026	5	525	Natural.	3,400	12	6,200	60	20

TABLE NO. 3—LEAD AND ZINC PRODUCTION.

Operating Company.	No. Men Em- ployed.	Average Wage Per Day.	No. Days Worked.	Tons Zinc Pro- duced.	Value of Zinc.	Tons of Lead pro- duced.	Value of Lead.	Value of Zinc and Lead Produced.
JOPLIN DISTRICT—								
Admiralty Zinc Company.....	50	\$4.00	250	1,132	\$44,042.44	86	\$6,813.38	\$50,855.82
Barbo Mining Company.....	40	4.00	130	913	29,126.46			29,126.46
Four Corners Mining Company.....	15	3.50	200	136	5,255.79			5,255.79
Howe Mining Company.....						39	3,175.04	3,175.04
Joplin Mining Company.....	22	3.75	30	35	1,050.00			1,050.00
Kansas Explorations Company, Inc.....	66	4.25	300	6,757	370,817.50	15	1,142.63	371,960.13
Missouri Mining Company.....	5	4.25	64	963	37,556.78	14	1,082.79	38,639.57
Missouri-Kansas Zinc Corporation.....	80	3.81	124	1,377	53,082.50	34	3,403.10	56,485.60
Octagon Mining Company.....	20	4.00	30	56	2,371.43			2,371.43
St. Charles Mining Company.....	20	3.62	60	190	4,394.84	37	2,747.35	7,142.19
Universal Explorations Company.....	28	4.10	150	752	26,805.36			26,805.36
Ben C. Westerman.....	14	4.25	270	550	22,000.00	50	4,000.00	26,000.00
White Shirt Mining Company.....	28	4.00		573	22,920.00	205	16,400.00	39,320.00
SOUTHEASTERN DISTRICT—								
Annapolis Lead Company.....	225	4.08	300			4,942	316,772.56	316,772.56
Desloge Cons. Lead Company.....	350	4.75	310			33,515	1,290,202.42	1,290,202.42
Doe Run Lead Company.....	757	5.00	309	1,553	92,398.07	45,230	4,956,100.50	5,048,498.57
St. Joseph Lead Company.....	1,890	5.00	309	2,356	141,787.95	141,039	11,689,394.50	11,831,182.45
St. Louis Smelting and Refining Works.....	714	5.00	310			35,738	2,472,700.00	2,472,700.00
Totals.....	4,334			17,343	\$853,609.12	260,944	\$20,763,934.27	\$21,617,543.39

LEAD AND ZINC PRODUCTION SUMMARY FOR YEARS 1928, 1927 AND 1926.

	<i>No. Men Em- ployed.</i>	<i>Approximate Annual Payroll.</i>	<i>1928</i>		<i>1927</i>		<i>1926</i>	
			<i>Tons.</i>	<i>Value.</i>	<i>Tons.</i>	<i>Value.</i>	<i>Tons.</i>	<i>Value.</i>
Lead—								
Southeastern District.....			260,464	\$20,725,169.98	291,368	\$22,708,113.51	300,403	\$30,450,746.70
Joplin District.....			480	38,764.29	1,992	179,713.64	3,413	323,794.52
Totals.....			260,944	\$20,763,934.27	293,360	\$22,887,827.15	303,816	\$30,774,541.22
Zinc—								
Southeastern District.....			3,909	\$234,186.02	8,358	\$286,510.55	1,241	\$86,673.97
Joplin District.....			13,434	619,423.10	27,184	949,768.09	43,357	2,115,418.78
Totals.....			17,343	\$853,609.12	35,542	\$1,236,278.64	44,598	\$2,202,092.75
Production by District—								
Southeastern—Lead.....	3,936	\$12,850,000.00	260,464	\$20,725,169.98	291,368	\$22,708,113.51	300,403	\$30,450,746.70
Southeastern—Zinc.....			3,909	234,186.02	8,358	286,510.55	1,241	86,673.97
Totals.....			264,373	\$20,959,356.00	299,726	\$22,994,624.06	301,644	\$30,537,420.67
Joplin—Lead.....			480	\$38,764.29	1,992	\$179,713.64	3,413	\$323,794.52
Joplin—Zinc.....	398	380,000.00	13,434	619,423.10	27,184	949,768.09	43,357	2,115,418.78
Totals.....			13,914	\$658,187.39	29,176	\$1,129,481.73	46,770	\$2,439,213.30
Totals for State—								
Total, Lead.....			260,944	\$20,763,934.27	293,360	\$22,887,827.15	303,816	\$30,774,541.22
Total, Zinc.....			17,343	853,609.12	35,542	1,236,278.64	44,598	2,202,092.75
Grand Total.....	4,334	\$13,230,000.00	278,287	\$21,617,543.39	328,902	\$24,124,105.79	348,414	\$32,976,633.97